That which is claimed:

1.   A method of managing Quality of Service (QoS) in a communication network, the method comprising:

5   requesting a level of QoS for communications in the communication network by a QoS request from a service provider; and

allocating the requested level of QoS to the service provider based on the QoS request.

10   2.   The method of Claim 1, wherein the service provider is at least one of an application service provider and a network service provider.

3.   The method of Claim 1, wherein requesting a level of QoS for communications in the communication network comprises requesting a level of QoS

15   by a QoS request from an application of the service provider.

4.   The method of Claim 1, wherein allocating the requested level of QoS to the application service provider comprises allocating the requested level of QoS to an application of the service provider.

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5.   The method of Claim 1, wherein allocating the requested level of QoS to the service provider comprises allocating a network capacity level for communication in the communication network with the service provider based on the QoS request.

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6.   The method of Claim 5, further comprising restricting communication through the communication network with the service provider to the allocated network capacity level.

30   7.   The method of Claim 1, wherein allocating the requested level of QoS to the service provider comprises allocating a communication priority level for communication in the communication network to the service provider based on the QoS request.

8. The method of Claim 1, wherein the allocated level of QoS is based on delay of information in the communication network.

9. The method of Claim 1, wherein the allocated level of QoS is based on information loss rate in the communication network.

10. The method of Claim 1, wherein the allocated level of QoS is based on packet size in the communication network.

11. The method of Claim 1, further comprising modifying Maximum Transmission Unit size for packets communicated through a network based on the allocated level of QoS.

12. The method of Claim 1, wherein:
allocating the requested level of QoS to the service provider comprises modifying a profile of information that is communicated through the communication network based on the allocated level of QoS.

13. The method of Claim 1, wherein allocating the requested level of QoS to the application comprises:
evaluating at a network service manager the QoS that is available in the communication network; and
allocating the requested level of QoS to the service provider based on the QoS request from the service provider and the evaluation of the QoS available in the communication network.

14. The method of Claim 13, wherein the network service manager comprises a DSL service manager.

15. The method of Claim 13, wherein evaluating at a network service manager the QoS available in the network comprises validating the QoS request from the service provider.

16. The method of Claim 15, wherein validating the QoS request from the service provider comprises comparing the QoS request to a DSL session data store.

17. The method of Claim 1, further comprising:

communicating the QoS request in a data packet through the communication network; and

5   evaluating the QoS request based on information in a known field in the data packet.

18. The method of Claim 17, further comprising:

identifying a protocol ID in the known field of the data packet; and

10   evaluating the QoS request based on the identified protocol ID.

19. The method of Claim 17, further comprising:

identifying a source address and/or a destination address in the known field of the data packet; and

15   evaluating the QoS request based on the identified source address and/or the destination address.

20. The method of Claim 17, further comprising:

identifying a source port number and/or a destination port number in the

20   known field of the data packet; and

evaluating the QoS request based on the identified source port number and/or a destination port number.

21. The method of Claim 1, wherein allocating the requested level of QoS

25   to the service provider comprises notifying a broadband remote access server of the allocated level of QoS.

22. The method of Claim 1, wherein allocating the requested level of QoS to the service provider comprises notifying a routing gateway of the allocated level of

30   QoS.

23. The method of Claim 1, further comprising notifying the service provider of the allocated level of QoS.

24. A computer program product for managing Quality of Service (QoS) in a communication network, the computer program product comprising program code embodied in a computer-readable storage medium, the computer program code comprising:

5   service provider program code that is configured to request a level of QoS for communications in the communication network by a QoS request from a service provider; and

QoS allocation program code that is configured to allocate the requested level of QoS to a service provider based on the QoS request.

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25. The computer program product according to Claim 24, wherein the QoS allocation program code is configured to allocated the requested level of QoS to an application program of at least one of an application service provider and a network service provider based on the QoS request.

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26. The computer program product according to Claim 24, wherein the QoS allocation program code is configured to allocate a network capacity level for communication in the communication network based on the QoS request, and further comprising QoS management program code that is configured to restrict

20   communication through the communication network with the service provider to the allocated network capacity level.

27. The computer program product according to Claim 24, wherein the QoS allocation program code is configured to allocate a communication priority level

25   for communication in the communication network based on the QoS request, and further comprising QoS management program code that is configured to prioritize communication through the communication network with the service provider based on the allocated communication QoS level.

30   28. The computer program product according to Claim 24, further comprising QoS management program code that is configured to shape information flow through the communication network with the service provider based on the QoS request.

29.   The computer program product according to Claim 24, further comprising program code that is configured to validate the QoS request from the service provider by comparing the QoS request to a DSL session data store.

5   30.   The computer program product according to Claim 24, further comprising program code that is configured to identify the service provider that requested the level of QoS, and is configured to evaluate the QoS request based on the identified service provider.

10   31.   The computer program product according to Claim 24, further comprising program code that is configured to identify an application program of the service provider that is associated with the QoS request, and is configured to evaluate the QoS request based on the identified application program.

15   32.   The computer program product according to Claim 24, further comprising program code that is configured to notify a broadband remote access server of the allocated level of QoS.

33.   The computer program product according to Claim 24, further 20   comprising program code that is configured to notify a routing gateway of the allocated level of QoS.

34.   A communication system comprising:
a service provider;
25   an application framework infrastructure;
an access network communicatively coupling the service provider and the application framework infrastructure;
a plurality of routing gateways; and
a wide area network that communicatively couples the application framework
30   infrastructure and the plurality of routing gateways, wherein the service provider is configured to request a level of Quality of Service (QoS) for communication in the wide area network by a QoS request.

35.   The communication system of Claim 34, wherein the service provider
35   is at least one of an application service provider and a network service provider.

36.   The communication system of Claim 34, wherein the application framework infrastructure is configured to allocate the requested level of QoS to an application service provider based on the QoS request.

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37.   The communication system of Claim 36, wherein the application framework infrastructure is configured to identify at least one of the plurality of routing gateways that communicates with the application service provider, and is configured to notify the identified at least one of the plurality of routing gateways of

10   the allocated level of QoS.

38.   The communication system of Claim 36, further comprising a broadband remote access server, wherein the application framework infrastructure is configured to notify the broadband remote access server of the allocated level of QoS.

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39.   The communication system of Claim 34, wherein the service provider is configured to request a level of QoS based on a request from at least one application program that is hosted by the service provider.

20   40.   A method of managing Quality of Service (QoS) in a communication network, the method comprising:
        allocating a different QoS level to each one of a plurality of service providers; and
        managing communications with each of the plurality of service providers

25   based on the allocated QoS levels.

41.   A method of managing Quality of Service (QoS) in a communication network, the method comprising:
        allocating a different QoS level to each one of a plurality of IP addresses; and

30   managing communications with applications that are associated with the plurality of IP addresses based on the allocated QoS levels.